

# Panasonic

Stereo Colour Television  
With Teletext  
**TX-2985Z**

AV Stereo Colour Television  
With Teletext  
**TX-2980Z**

## Operating Instructions

Please read these operating instructions completely before  
operating this set and retain the booklet for future reference.  
Copyright © 1997 All Rights Reserved.

TQB4A0117

GETTING  
STARTED

CONTROL  
BUTTONS

REMOTE  
CONTROL

VCR  
CONTROLS

TELETEXT  
CONTROLS

TUNING

A/V  
CONNECT

CUSTOMER  
INFORMATION

*Dear Panasonic Customer,*

*Welcome to the Panasonic family. We hope that you will have many years of enjoyment from your new Colour Television.*

*Please retain your proof of purchase along with these operating instructions. Space has been made available on page 25 of this instruction book for recording the Serial Number. The Serial Number can be found on the back cover of the set and on the packing carton.*

## Important Information

### Programme Location Numbers

Throughout this booklet "Programme Location Numbers" are referred to. *These are memory locations into which you can tune television broadcast stations. Any television station can be tuned into any Programme Location Number.*

### Picture Quality

All televisions are affected by Magnetic Interference.



Magnetic interference may come from such things as unshielded motors, moving the TV while it is switched ON, turning off a vacuum cleaner too close to the TV, lightning strikes nearby or many other things.

The interference shows up as *coloured patches* which appear while the TV is switched ON.

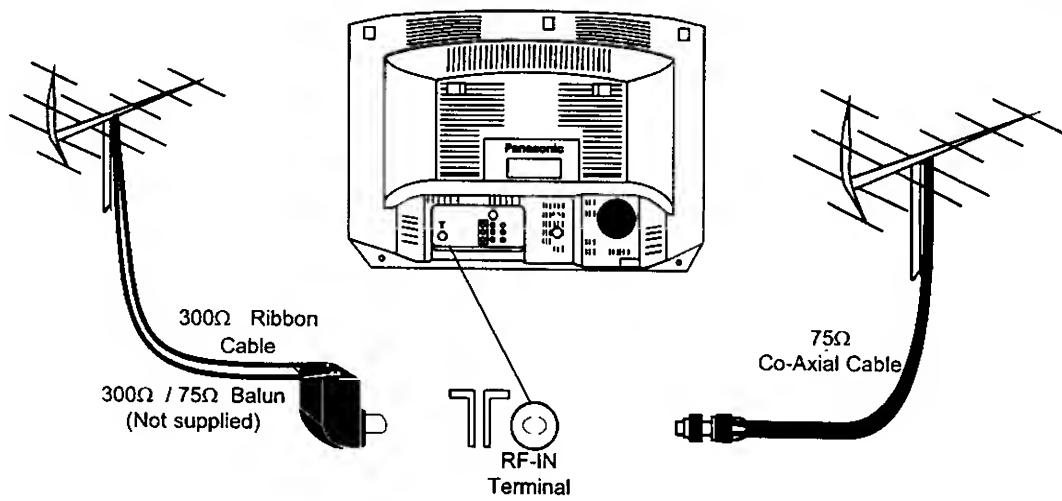
A typical result may look like the picture shown.

- Your Panasonic Television is designed to overcome this with the inclusion of a demagnetising (degaussing) function.
- To activate this feature, simply switch your Television OFF with the Power On/Off Switch (not with the remote control) for 30 minutes and then switch it back ON.
- This will ensure that you enjoy the picture clarity as it was meant to be.

# Getting Started

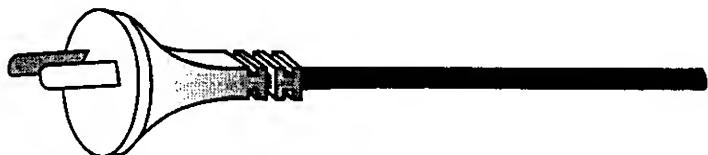
## Connect the Aerial

The RF (Aerial) Input impedance of this television is  $75\Omega$ . If your aerial lead is  $300\Omega$  ribbon (two wires separated by a flat plastic sheet) you will require a  $300\Omega/75\Omega$  Balun in order to connect your aerial to the television.



For your safety any external aerial should be installed by a reputable qualified installer and should comply with New Zealand Standard IEC597-1.1

## Connect the Power Plug

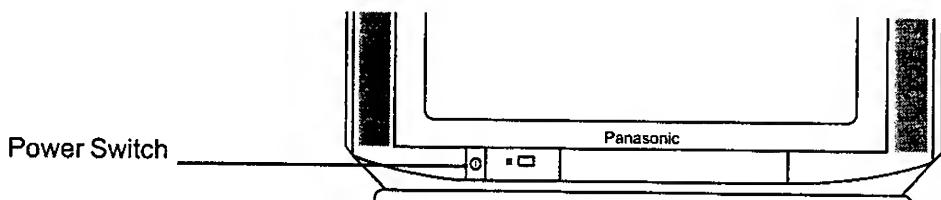


This television is designed for the New Zealand Standard Mains Voltage of 230V 50Hz.

### NOTE:

If the television is not going to be used for an extended period, remove the power plug from the wall outlet.

## Turn on the Television



Push the Power Switch to turn the television ON. Sit back and enjoy your new Panasonic television.

## CONTENTS

<b>Control Panel Television Operation .....</b>	<b>6 ~ 7</b>
Control Panel .....	6
Control Panel Buttons .....	6
POWER .....	6
TV/AV. ....	6
 VOLUME DOWN .....	7
 VOLUME UP .....	7
 PROGRAMME NUMBER DOWN .....	7
 PROGRAMME NUMBER UP .....	7
PRE .....	7
FUNC. Colour, NTSC-Tint, Bright, Contrast, Sharpness, bass, Treble, Balance, Colour Sys .....	7
<b>Remote Control Television Buttons .....</b>	<b>8 ~ 12</b>
Battery Installation and Replacement .....	8
Cleaning the Remote Control .....	8
Remote Control Television Buttons .....	9
GAME .....	10
 STAND-BY .....	10
0 ~ 9 DIRECT PROGRAMME NUMBER SELECTION .....	10
 RECALL .....	10
 PICTURE FUNCTION .....	10
 FUNCTION UP & DOWN .....	10
 SOUND FUNCTION .....	11
 STEREO/MONO .....	11
 OFF-TIMER .....	11
 SOUND MUTE .....	11
TV/AV .....	12
 PROGRAMME NUMBER UP .....	12
 PROGRAMME NUMBER DOWN .....	12
 VOLUME UP .....	12
 VOLUME DOWN .....	12
 TWO DIGIT PROGRAMME NUMBER SELECTION .....	12
PICTURE MENU .....	13
N NORMALISATION .....	13
SOUND MENU .....	13
SURROUND .....	13
<b>VCR Operation .....</b>	<b>14 ~ 15</b>
Remote Control VCR Buttons .....	14
VCR Mode Selection Switch .....	14
 REWIND / REVIEW .....	15
 STAND-BY .....	15
 STOP .....	15
 TV / VCR .....	15
 PAUSE .....	15

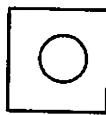
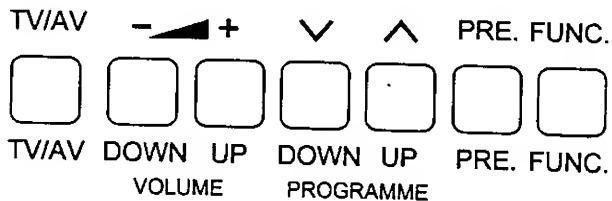
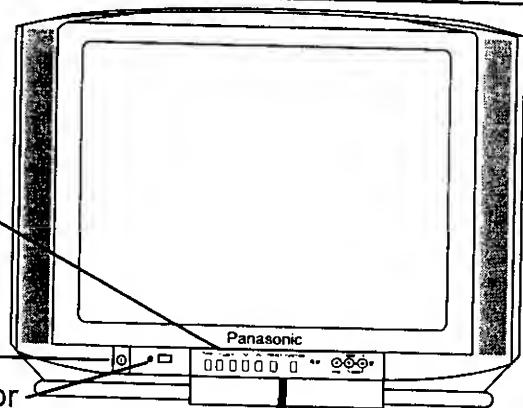
## CONTENTS

▶	PLAY .....	15
▶▶	FAST FORWARD / CUE .....	15
▶▶▶	STILL ADVANCE .....	15
REC ●	RECORD .....	15
^	PROGRAMME NUMBER UP .....	15
▼	PROGRAMME NUMBER DOWN .....	15
<b>Teletext Operation .....</b>		<b>16 ~ 18</b>
Remote Control Buttons .....		16
0 ~ 9	PAGE SELECTION BUTTONS .....	16
	FULL / TOP / BOTTOM .....	16
	TV/TEXT .....	17
⌚	TIME TEXT .....	17
⌚⌚	RED, GREEN, YELLOW, CYAN .....	17
⌚⌚⌚	REVEAL .....	17
↖ ↘	PAGE UP & PAGE DOWN .....	17
☰	INDEX .....	17
☰☰	HOLD .....	17
Teletext Page Selection .....		18
Teletext Sub-Page Selection .....		18
<b>Tuning Procedure .....</b>		<b>19 ~ 22</b>
Automatic Search .....		19
Manual Search .....		20
Tuning the Television to a VCR .....		20
Fine Tuning using AFC (Automatic Frequency Control) .....		21
Cancelling the Fine Tuning .....		21
Skip .....		22
Cancelling the Skip .....		22
<b>Connecting Equipment .....</b>		<b>23 ~ 24</b>
Connecting Equipment to the TV (Front) .....		23
Front Panel Connectors (TX-2985Z only) .....		23
Connecting Equipment to the TV (Rear) .....		23 ~ 24
Monitor Out .....		23
Rear Terminals .....		24
Connecting a Standard VCR to the AV Input .....		24
Connecting S-Video Equipment to the AV Input (TX-2985Z only) .....		24
<b>Customer Information .....</b>		<b>25 ~ 27</b>
Customer's Record .....		25
Control Mode .....		25
Warnings and Cautions .....		26
Troubleshooting .....		26
Specifications .....		27

## Television Control Panel Buttons

### CONTROL PANEL

Open the control panel door to gain access to the Television Controls, the headphone socket and the front AV Terminals. Push the door at the point marked "PUSH" to open. Push again to close.



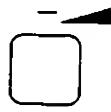
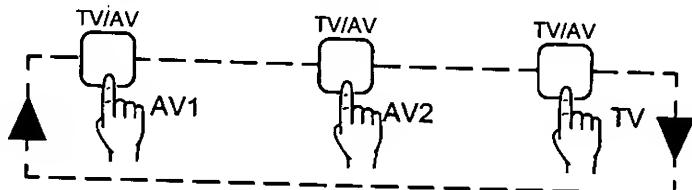
#### POWER

This button is used to turn the television on and off. The Indicator light (red) will be on whenever the television is ON or in Stand-By. The light will go out when the television is turned OFF.



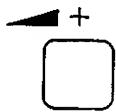
#### TV/AV

This button is used to select the normal broadcast television stations or one of the AV (Audio/Video) inputs.



#### VOLUME DOWN

This button is used to reduce the volume output level from the television. The volume level is indicated on the screen as a green bar and as a number (0 ~ 63).

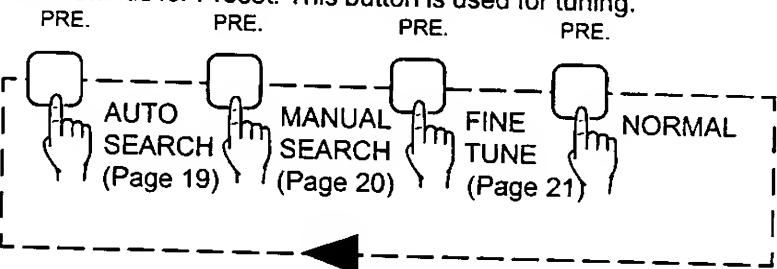


#### VOLUME UP

This button is used to increase the volume output level from the television.

## Television Control Panel Buttons

CONTROL  
BUTTONS

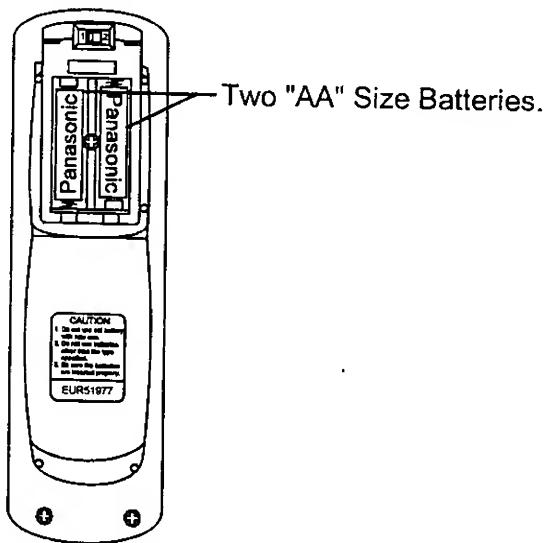
BUTTON	WHAT IT DOES																		
	<b>PROGRAMME NUMBER DOWN</b> Pressing this button selects the next lower Programme Number in sequence. Programme Numbers which have been "Skipped" (See page 22) will be bypassed when this button is used.																		
	<b>PROGRAMME NUMBER UP</b> Pressing this button selects the next higher Programme Number in sequence. Programme Numbers which have been "Skipped" (See page 22) will be bypassed when this button is used.																		
<b>PRE.</b> 	<b>PRE.</b> stands for Preset. This button is used for tuning. 																		
<b>FUNC.</b> 	<b>FUNC.</b> stands for Function. Pressing this button allows you to make adjustments to the various functions of the television. Each time the button is pressed the next function is selected. Each function can be adjusted by using the Volume Up (+) or the Volume Down (-) Buttons. The functions are displayed in the following sequence:- <table> <tbody> <tr> <td>COLOUR</td> <td>Increase or decrease the colour level.</td> </tr> <tr> <td>NTSC-TINT</td> <td>Increase or decrease the colour level. (Only operates in the AV Mode with an NTSC signal).</td> </tr> <tr> <td>BRIGHT</td> <td>Increase or decrease the brightness level.</td> </tr> <tr> <td>CONTRAST</td> <td>Increase or decrease the contrast level.</td> </tr> <tr> <td>SHARPNESS</td> <td>Increase or decrease the picture sharpness.</td> </tr> <tr> <td>BASS</td> <td>Increase or decrease the sound bass level.</td> </tr> <tr> <td>TREBLE</td> <td>Increase or decrease the sound treble level.</td> </tr> <tr> <td>BALANCE</td> <td>Adjust the sound level balance between the left and right speakers.</td> </tr> <tr> <td>COLOUR SYS</td> <td>Switches between the following colour system options:- AUTO, PAL , NTSC 4.43, NTSC 3.58.</td> </tr> </tbody> </table> <p>The television Colour System is normally set to the AUTO mode. If the AV picture is from an NTSC tape choose the Colour-Sys setting which gives the best picture.</p>	COLOUR	Increase or decrease the colour level.	NTSC-TINT	Increase or decrease the colour level. (Only operates in the AV Mode with an NTSC signal).	BRIGHT	Increase or decrease the brightness level.	CONTRAST	Increase or decrease the contrast level.	SHARPNESS	Increase or decrease the picture sharpness.	BASS	Increase or decrease the sound bass level.	TREBLE	Increase or decrease the sound treble level.	BALANCE	Adjust the sound level balance between the left and right speakers.	COLOUR SYS	Switches between the following colour system options:- AUTO, PAL , NTSC 4.43, NTSC 3.58.
COLOUR	Increase or decrease the colour level.																		
NTSC-TINT	Increase or decrease the colour level. (Only operates in the AV Mode with an NTSC signal).																		
BRIGHT	Increase or decrease the brightness level.																		
CONTRAST	Increase or decrease the contrast level.																		
SHARPNESS	Increase or decrease the picture sharpness.																		
BASS	Increase or decrease the sound bass level.																		
TREBLE	Increase or decrease the sound treble level.																		
BALANCE	Adjust the sound level balance between the left and right speakers.																		
COLOUR SYS	Switches between the following colour system options:- AUTO, PAL , NTSC 4.43, NTSC 3.58.																		

## Remote Control

### Battery Installation and Replacement

#### Open the Battery Cover

Place your thumb over the battery cover at the arrow head. Apply slight downward pressure and slide back. The cover will come away from the remote control.



#### Replace the Batteries

(Use "AA" size batteries only.)

Insert the batteries according to the corresponding "+" and "-" symbols on both the batteries and inside the Battery compartment. Replace the Rear Cover.

#### Battery Precautions

**Do Not** use rechargeable batteries. Differences in size and performance may cause incorrect operation.

**Do Not** mix battery types (Alkaline with zinc-carbon etc.)

**Do Not** mix old and new batteries. Replace both batteries at the same time.

**Do Not** attempt to recharge batteries.

**Do Not** short circuit batteries.

**Do Not** disassemble batteries.

**Do Not** heat or burn batteries.

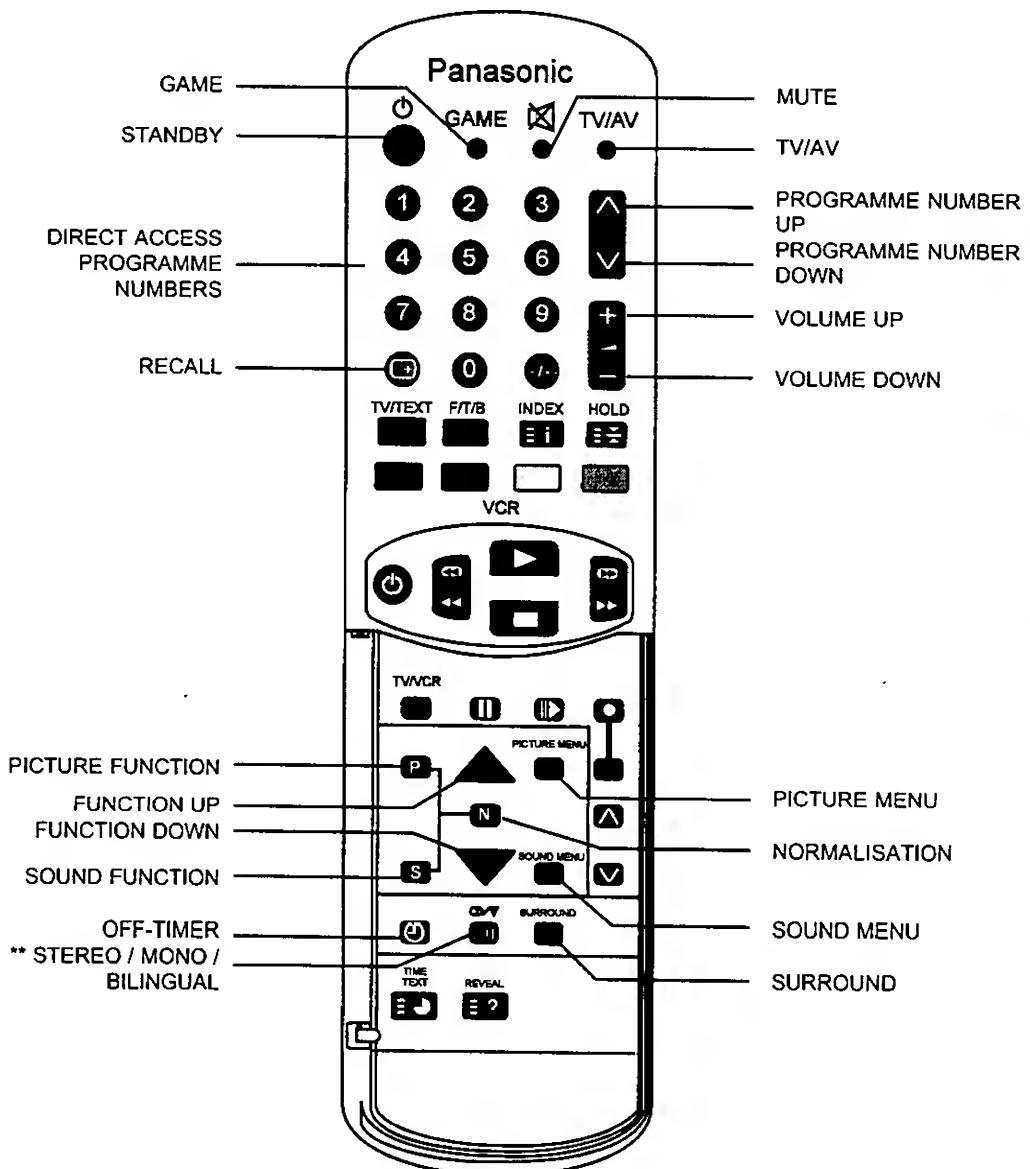
### Cleaning The Remote Control

The lens of the Remote Control should be kept clean and free of dirt and grease. Use water and a mild detergent to keep the lens clean.



# Remote Control Television Operation

## Remote Control Television Buttons



REMOTE  
CONTROL

\*\* This button is not on the remote control for the TX-2980Z.

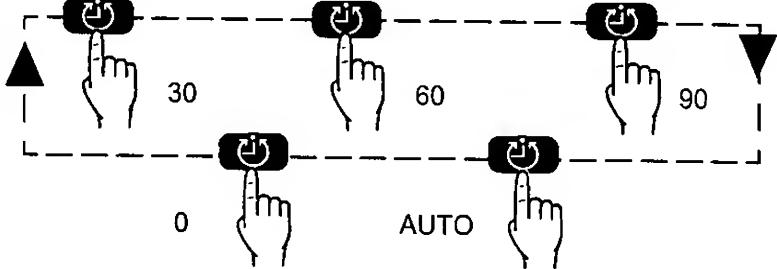
Please refer to page 14 for details of VCR buttons. (Only the more common functions have been included. Some VCRs have different functions so always refer to the individual VCR instruction manual.)

Please refer to page 16 for details of TELETEXT buttons.

## Remote Control Television Operation

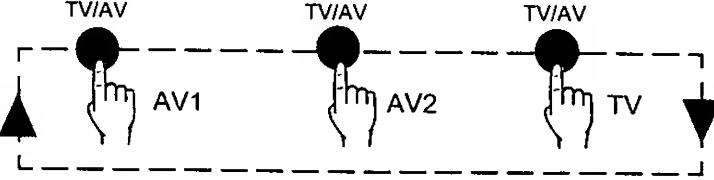
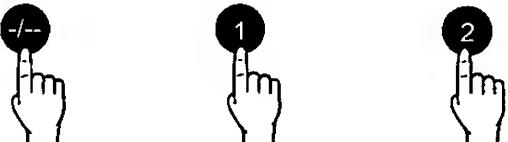
BUTTON	WHAT IT DOES										
	<b>GAME</b> This button is used to switch between the television and AV2. The picture options can be individually set for AV2 when in the Game mode.										
	<b>STAND-BY</b> The remote control button is used to turn the television into Stand-by mode. When the television is in Stand-By it is possible to turn it back on by pressing this remote control Power Button, the Programme Number UP Button, the Programme Number DOWN Button or any of the direct Programme Number Buttons.										
	<b>DIRECT PROGRAMME NUMBER SELECTION</b> Single Digit Programme Numbers (0 to 9) can be accessed directly by pressing the corresponding number on the Remote Control Transmitter.										
	<b>RECALL</b> This button operates in three stages. Stage 1 - Pressing this button will display all current active functions. The functions which can be displayed include AV Number, Programme Number, Colour System, Sound Menu, Picture Menu, Surround Mode, Stereo or Mono and Off-Timer setting. After about 2 seconds it automatically switches to stage 2. Stage 2 - Pressing the button again displays the Programme Number or the AV Number. Stage 3 - Pressing for the third time cancels the recall function.										
	<b>PICTURE FUNCTION</b> Pressing this button allows you to make adjustments to the picture functions of the television. Each time the button is pressed the next function is selected. Each function can be adjusted by using the Function Up ( $\blacktriangle$ ) or the Function Down ( $\blacktriangledown$ ) Buttons. The functions are displayed in the following sequence:-										
	<table> <tbody> <tr> <td>COLOUR</td> <td>Increase or decrease the colour level.</td> </tr> <tr> <td>NTSC-TINT</td> <td>Increase or decrease the colour level. (Only operates in the AV Mode with an NTSC Signal).</td> </tr> <tr> <td>BRIGHT</td> <td>Increase or decrease the brightness level.</td> </tr> <tr> <td>CONTRAST</td> <td>Increase or decrease the contrast level.</td> </tr> <tr> <td>SHARPNESS</td> <td>Increase or decrease the picture sharpness.</td> </tr> </tbody> </table>	COLOUR	Increase or decrease the colour level.	NTSC-TINT	Increase or decrease the colour level. (Only operates in the AV Mode with an NTSC Signal).	BRIGHT	Increase or decrease the brightness level.	CONTRAST	Increase or decrease the contrast level.	SHARPNESS	Increase or decrease the picture sharpness.
COLOUR	Increase or decrease the colour level.										
NTSC-TINT	Increase or decrease the colour level. (Only operates in the AV Mode with an NTSC Signal).										
BRIGHT	Increase or decrease the brightness level.										
CONTRAST	Increase or decrease the contrast level.										
SHARPNESS	Increase or decrease the picture sharpness.										
	<b>FUNCTION UP &amp; DOWN</b> This button is used with the Picture Function and Sound Function Buttons to select the function to be changed.										

## Remote Control Television Operation

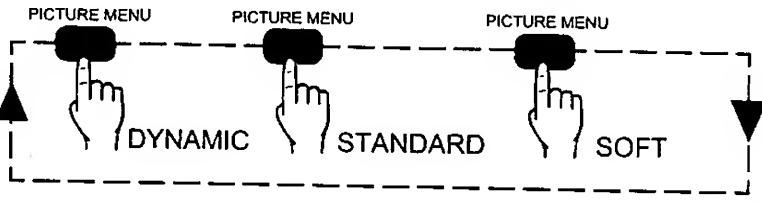
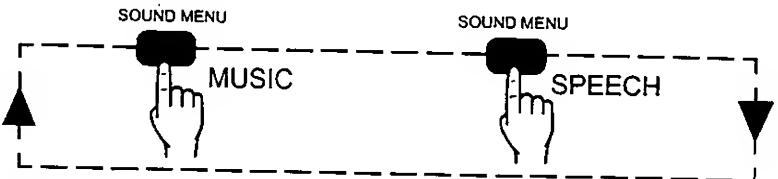
BUTTON	WHAT IT DOES						
	<p><b>SOUND FUNCTION</b>          Pressing this button allows you to make adjustments to the sound functions of the television. Each time the button is pressed the next function is selected. Each function can be adjusted by using the Function Up (▲) or the Function Down (▼) Buttons. The functions are displayed in the following sequence:-</p> <table> <tr> <td>BASS</td> <td>Increase or decrease the sound bass level.</td> </tr> <tr> <td>TREBLE</td> <td>Increase or decrease the sound treble level.</td> </tr> <tr> <td>BALANCE</td> <td>Adjust the sound level balance between the left and right speakers.</td> </tr> </table>	BASS	Increase or decrease the sound bass level.	TREBLE	Increase or decrease the sound treble level.	BALANCE	Adjust the sound level balance between the left and right speakers.
BASS	Increase or decrease the sound bass level.						
TREBLE	Increase or decrease the sound treble level.						
BALANCE	Adjust the sound level balance between the left and right speakers.						
	<p><b>STEREO / MONO (TX-2985Z only)</b>          Normally the television will detect whether the broadcast signal is Mono or Stereo and will set the mode accordingly. If the Stereo signal is weak or the receiving conditions are not optimum, it is recommended that the Mono mode be manually selected. Pushing the button changes the mode from Stereo to Mono and back again.</p>						
	<p><b>OFF-TIMER</b>          Pressing the Off-Timer allows the television to be preset to turn off after a period of time. The timer settings (in minutes) are:</p>  <p>Setting the Off-Timer to AUTO will cause the television to turn off (to Stand-by) five minutes after the television broadcast station you are tuned to stops transmitting.          Setting the OFF-TIMER to 0 will cancel the timer operation.</p>						
	<p><b>SOUND MUTE</b>          Pressing this button reduces the sound from the television to nil. Pressing the button again returns the sound to the original setting. Pressing either Volume Up ( + ) or Down ( - ) will also restore the volume level setting.</p>						

REMOTE  
CONTROL

## Remote Control Television Operation

BUTTON	WHAT IT DOES
TV / AV 	<p><b>TV / AV</b> Pressing the TV/AV Button will cycle between the TV, AV1, AV2 and back to TV.</p> 
	<p><b>PROGRAMME NUMBER UP</b> Pressing this button selects the next higher Programme Number in sequence. Programme Numbers which have been "Skipped" (See page 22) will be bypassed when this button is used.</p>
	<p><b>PROGRAMME NUMBER DOWN</b> Pressing this button selects the next lower Programme Number in sequence. Programme Numbers which have been "Skipped" (See page 22) will be bypassed when this button is used.</p>
	<p><b>VOLUME UP</b> This button is used to increase the volume output level from the television. The volume level is indicated on the screen as a green bar and as a number (0 ~ 63).</p>
	<p><b>VOLUME DOWN</b> This button is used to decrease the volume output level from the television.</p>
	<p><b>TWO DIGIT PROGRAMME NUMBER SELECTION</b> To directly access Programme Numbers 10 to 99, press the "- / - -" Button followed by the two digits required. For example, to select Programme Number 12:-</p> 
	<p>The On-Screen display will be as shown:-</p> 

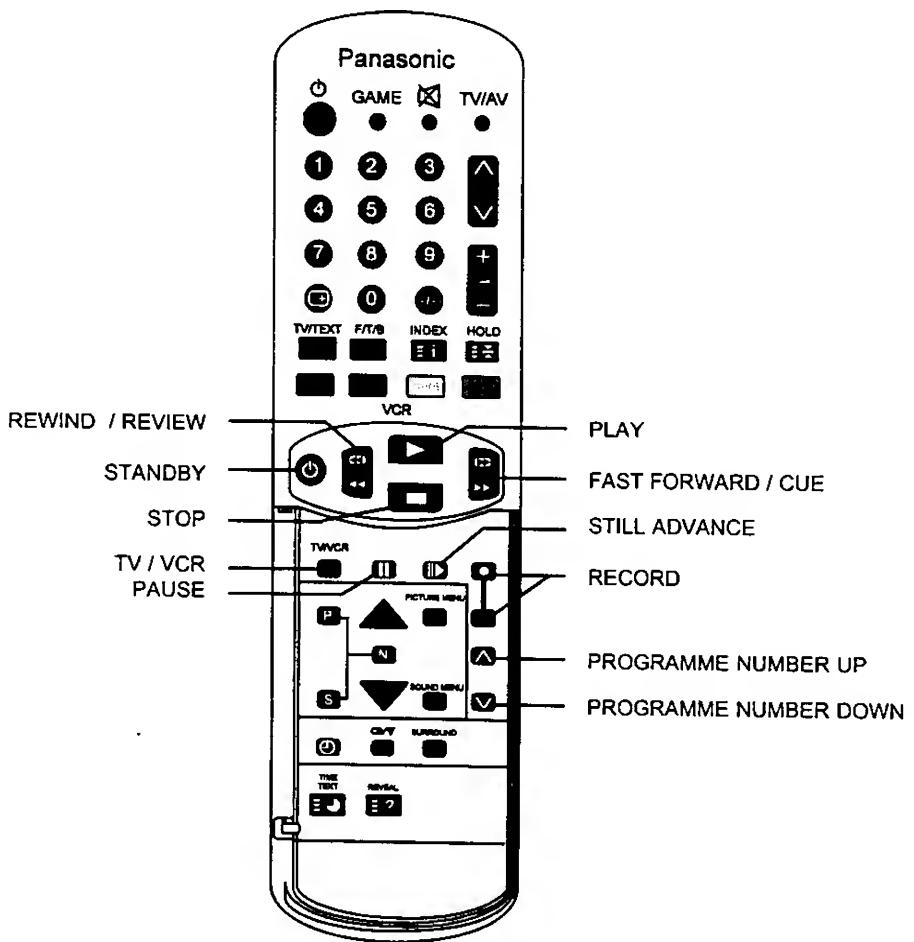
## Remote Control Television Operation

BUTTON	WHAT IT DOES
PICTURE MENU 	<p><b>PICTURE MENU</b> The Picture Menu Button allows you to select one of three different picture modes (Standard, Dynamic, Mild).</p>  <p>Dynamic: Used for viewing in brighter environments (daytime viewing). Higher levels of contrast and brightness setting are selected.      Standard: Used for normal viewing conditions (evening lighting). The contrast and brightness setting are set to standard.      Soft: Used for viewing conditions in a darkened room. The contrast and brightness levels are reduced.</p>
N 	<p><b>NORMALISATION</b> The Normalisation Button is used to reset the television to factory set preset levels for Colour, Sharpness, Contrast, Brightness, Treble, Bass and Balance. The button will only operate if the relevant menu is displayed on the screen.</p>
SOUND MENU 	<p><b>SOUND MENU</b> The Sound Menu Button allows you to choose between two different sound modes (Music, Speech).</p>  <p>Music: Used where music is more common than speech such as musicals, video clips etc.      Speech: Used where speech is more common than music such as talk shows, news broadcasts etc.</p>
SURROUND 	<p><b>SURROUND SOUND</b> Surround Sound is designed to recreate the spatial effect of a movie theatre or concert hall. It brings an added depth to the sound from your television.      During Stereo broadcasts, pressing this button switches between "STEREO SURROUND" and "SURROUND OFF".</p>

REMOTE  
CONTROL

## Remote Control VCR Operation

### Remote Control VCR Buttons

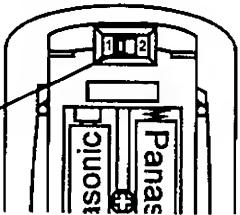


### VCR Mode Selection Switch

This remote control has been designed to work with a selected group of Panasonic and National video recorders. It may not work with some older model VCRs. With the majority of compatible Panasonic or National VCRs the VCR Mode Selection Switch should be set to "1". If VCR control cannot be carried out try setting this switch to position "2". This switch is located under the battery cover.

To open the battery cover, apply a slight downward pressure and slide the cover back. This allows the cover to be removed.

VCR Mode Selection Switch



## Remote Control VCR Operation

BUTTON	WHAT IT DOES
	<b>REWIND / REVIEW</b> This button causes the tape to reverse. With some VCRs it is possible to watch the picture in reverse in order to find a particular place on the tape.
	<b>VCR POWER (STAND-BY)</b> This button is used to turn the VCR Off. VCRs are usually left in Stand-By in order for the Dew detector to work correctly.
	<b>STOP</b> Pressing this button stops the tape drive and cancels any recording or playback activity.
TV / VCR 	<b>TV / VCR</b> Used to switch the output of the VCR between the video tape / VCR Programme Number and the aerial input.
	<b>PAUSE</b> This button is used to stop the tape momentarily. Depending on the VCR, the tape drive may automatically turn off after a preset time.
	<b>PLAY</b> Used to start playback of a tape.
	<b>FAST FORWARD / CUE</b> This button causes the tape to increase speed. With some VCRs it is possible to watch the picture during fast forward in order to find a particular place on the tape.
	<b>STILL ADVANCE</b> When the Pause has been activated, pushing this button will move the tape forward one frame at a time.
	<b>RECORD *</b> Push the Red Record Button in order to commence recording. (Some VCRs may need both buttons to be pushed).
	<b>PROGRAMME NUMBER UP</b> Pressing this button selects the next higher VCR Programme Number in sequence.
	<b>PROGRAMME NUMBER DOWN</b> Pressing this button selects the next lower VCR Programme Number in sequence.

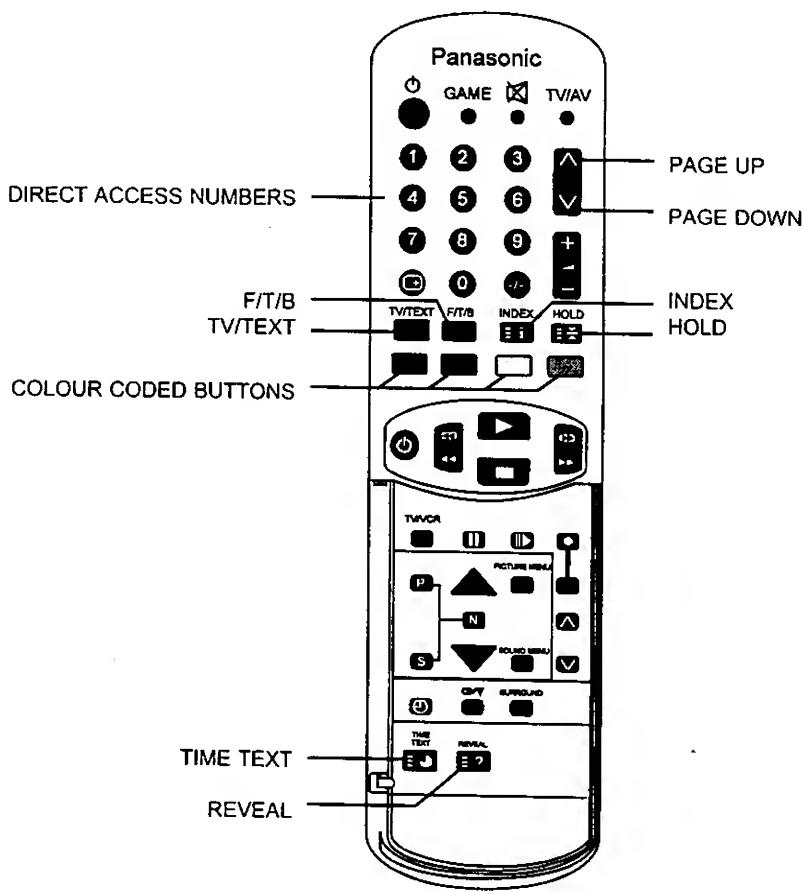
VCR  
CONTROLS

### \* WARNING:

Unauthorised recording of material from Television Broadcasts or from other video and/or audio sources may contravene copyright laws.

## Remote Control Teletext Operation

### Remote Control Buttons



**Note:** The time taken to display the pages and sub-pages is governed by the teletext transmitter and not by the television.

BUTTON	WHAT IT DOES
0 ~ 9	<b>NUMBER BUTTONS</b> Used to select the required Teletext page number.
F / T / B 	<b>F/T/B (Full / Top / Bottom)</b> This button is used when difficulty is experienced in reading text on the screen. Pushing the F/T/B Button expands and displays the upper half of the screen. Pushing the F/T/B Button again expands and displays the lower half of the screen. Pushing the F/T/B Button a third time returns the display to normal condition. When a new page is selected while the F/T/B function is active it will automatically display the top half of the new page.

## Remote Control Teletext Operation

BUTTON	WHAT IT DOES
<b>TV/TEXT</b> 	<b>TV/TEXT</b> This button is used to switch between TV Mode and Teletext Mode. The Teletext screen will only appear if the selected channel is transmitting Teletext information. If Teletext is not being transmitted, the picture on the screen will not change.
<b>TIME TEXT</b> 	<b>TIME TEXT</b> This button gives access to individual sub-pages.
	<b>COLOUR CODED BUTTONS</b> These buttons store Page Numbers to allow easy access to other pages. The red and green buttons also act as sub-page down and page up buttons in TIME TEXT mode.
<b>REVEAL</b> 	<b>REVEAL</b> Some Text pages contain concealed information, e.g. the solution to a puzzle. To reveal this information press the Reveal Button. To hide the information, press the Reveal Button again.
	<b>PAGE NUMBER UP &amp; DOWN BUTTONS</b> These buttons are used to select the next higher or lower page. Unused pages are skipped (bypassed).
<b>INDEX</b> 	<b>INDEX</b> This button is used to return to the Main Index Page. This Button can be pressed at any time.
<b>HOLD</b> 	<b>HOLD</b> When a selected Teletext page consists of a number of sub-pages the sub-pages will rotate automatically unless the "Hold" function has been activated. Pushing this button will cause the sub-page to stay on the screen. Pushing Hold again will cancel the operation. Whenever this function is activated the  symbol will appear on the screen.

TELETEXT  
CONTROLS

## Remote Control Teletext Operation

### Important Information

*Teletext is only available on certain broadcast channels.  
The time taken to display the pages and sub-pages is governed by  
the teletext transmitter and not by the television.*

#### Teletext Page Selection

TV/TEXT

Push the TV/TEXT Button to select Text Mode. If the volume is left on you can hear the television programme while watching teletext.

0 ~ 9

The main index will be displayed. The main index lists the topics available from teletext. Each topic may have its own index.

▲ ▼

Select the required starting page number. All page numbers consist of three digits; the lowest page number is 100 and the highest is 899.

— — —

Use the Page Number Up & Down buttons to select the next higher or Lower page.

— — —

The colour coded buttons will have page numbers allowing quicker access to some pages.

TV/TEXT

Press TV/TEXT to return to television viewing.

#### Teletext Sub-Page Selection

When a Page has more than one screen (sub-page) of information, it takes approximately 30 seconds before each sub-page is displayed. You may have to wait for some time before the sub-page you require becomes available.

With this function it is possible to enter the number of the desired sub-page. This sub-page number entered will be the next one displayed.

Select Text Mode and choose a page as described above.

▼

Press the Time Text button

0 ~ 9

When the page has been received, the sub-pages can be viewed. The sub-page number must be entered as a four digit number e.g. sub-page 3 would be entered as 0003.

— —

Pushing the red button selects the previous sub-page number. Pushing the green button selects the next sub-page number.

TV/TEXT

Press TV/TEXT to return to television viewing.

## Tuning Procedure (Automatic Search)

### Important Information

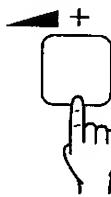
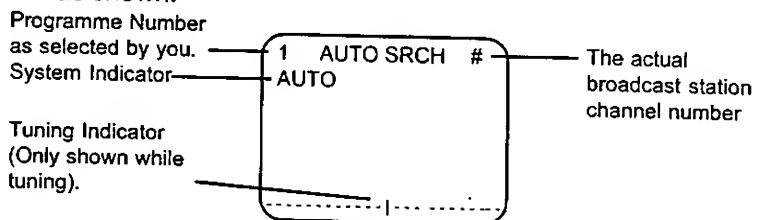
Use the automatic tuning procedure only if you wish to reset *ALL* Programme Number Locations. The numbers on the remote control refer to Programme Location Numbers and do not necessarily correspond to local television channel numbers. If you want the local television station numbers and the Programme Location Numbers to agree *DO NOT* use this function: refer to "Manual Search" on page 20.

The TV/AV switch should be set to TV for this function to operate. When you start the automatic search, the television will automatically search for television broadcasts through both VHF bands and the UHF band. During this process all of the available television broadcast channels will be automatically allocated to sequential Programme Number locations starting with location 1.

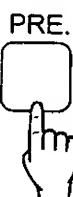
PRE.



1. Press the PRE. (Preset) button. The on-screen display appears as shown:



2. Press the Volume Up (+) Button to start the Auto Search. Auto Search will automatically allocate each received broadcast signal to a sequential Programme Number. The operation will cease when all available channels have been tuned.



3. Return the television to normal operation by pushing the PRE. Button three times.

#### NOTE:

A maximum of 100 television channels (0~99) can be programmed.

TUNING

After you have finished with the automatic tuning and returned to normal viewing, push the Programme Number Up □ Button to confirm the tuning condition for each Programme Number. If a Programme Number is unwanted, it is possible to "SKIP" or bypass that Programme Number. Please refer to "SKIP" setting details on page 22.

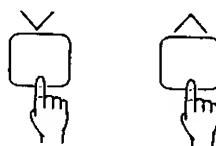
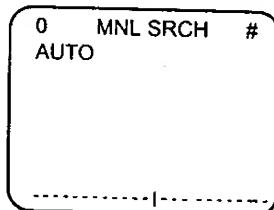
## Tuning Procedure (Manual Search)

Use this tuning procedure only if you wish to reset individual Programme Numbers. The television should be switched ON and the TV/AV Switch set to TV. Refer to page 19 for details of the on-screen display.

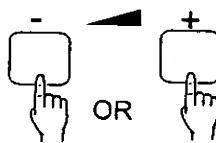
PRE.



1. Press the PRE. (Preset) button until the on-screen display appears as shown:



2. Press the Programme Up (^) or Programme Down (v) button to select the required Programme Number. The Programme Number can also be selected directly using Direct Access Programme Numbers on the remote control.



3. Press the Volume Up (+) or Volume Down (-) button to start the Manual Search. The Search function will automatically search for the next broadcast channel and will stop when one is found. Press the button again if the channel is not the desired one.

4. To tune more stations repeat steps 2 and 3 until all channels are tuned. A maximum of 100 Programme Numbers (0 ~ 99) can be programmed.

5. Press the PRE. Button twice to finish the tuning procedure.



## Tuning the Television to a VCR

1. Turn the VCR On and either start a known tape playing or set the VCR Test Signal, if fitted, to On (refer to the VCR operating instructions).
2. Repeat steps 2, 3 and 4 of the Manual Tuning procedure above. The television will treat the VCR as if it was a normal television broadcast station.

### NOTES:

1. The antenna lead must be connected to the VCR and the VCR RF-Out must be connected to the TV RF-In. Please refer to page 23.
2. The picture and sound quality are usually much better if the VCR is connected using the AV Terminals. Please refer to page 23.

## Fine Tuning (Automatic Frequency Control)

Under normal viewing conditions the AFC (Automatic Frequency Control) remains "ON". However in areas of poor reception or constant interference a slight adjustment to the tuning may improve the picture quality. The television should be switched ON and the TV/AV Switch set to TV. Refer to page 19 for details of the on-screen display.

PRE.

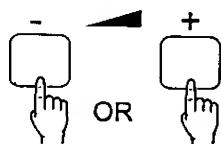
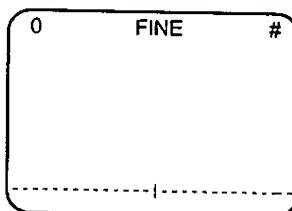


1. Press the PRE. (Preset) button three times.



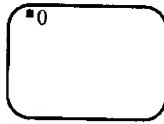
2. Press the Programme Up ( $\wedge$ ) or Programme Down ( $\vee$ ) button to select the required Programme Number. The Programme Number can also be selected directly using Direct Access Programme Numbers on the remote control.

The on-screen display will appear as shown:



3. Press the Volume Up (+) or Volume Down (-) button to start the Fine Tuning. The On-Screen Tuning Indicator will slowly move in the direction selected. When the button is released the tuned position will be automatically memorised.

A small square will appear to the left hand side of the Programme Number to indicate that the AFC has been turned OFF.



TUNING

4. If more than one Programme Number is to be Fine Tuned repeat steps 2 and 3.

PRE.



5. Press the PRE. Button once to finalise the operation.

### Cancelling the Fine Tuning

To cancel the Fine Tuning follow the Manual Search procedure on page 20.

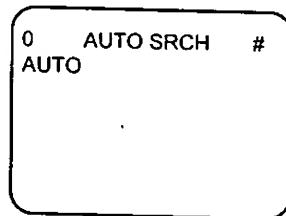
## Skip Operation

This option allows you to "SKIP" (bypass) the unused or undesired Programme Numbers. The Function is only applicable when the Programme Number Up or Down buttons are pressed. The use of the remote control Direct Programme Number Buttons overrides the Skip function. The television should be switched ON and the TV/AV Switch set to TV. Refer to page 19 for details of the on-screen display.

PRE.



1. Press the PRE. (Preset) button.  
The on-screen display appears as shown:

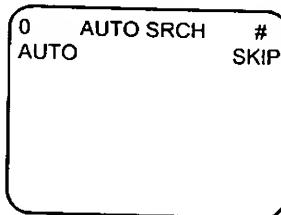


2. Press the Programme Number Up or Down button to select the Programme Number you want to skip. The Programme Number can be selected using the Direct Access Programme Number buttons on the remote control.

TV/AV



3. Press the TV/AV button.  
The on-screen display will change as shown :



4. If you wish to skip any more Programme Numbers repeat steps 2 and 3.

PRE.



5. Press the PRE. Button three times to return the TV to normal operating mode.

### How to Cancel the Skip Operation

To cancel the Skip function follow the procedure outlined above. Use the "TV/AV" button to turn the "SKIP" off.

The Skip can also be cancelled by Manually tuning the Programme Number which has been "SKIPPED".

## Connecting Equipment to the TV (Front)

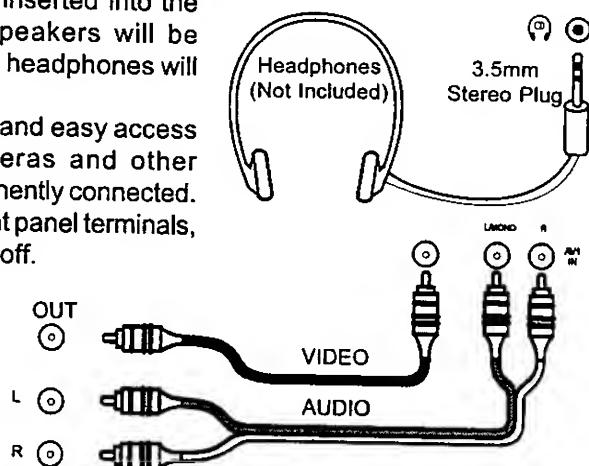
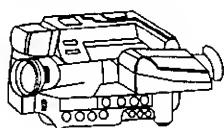
### Front Panel Connections (TX-2985Z only)

Behind the front panel door is the headphone socket and the AV2 input.

**NOTE:** When a headphone plug is inserted into the headphone socket the internal speakers will be automatically disconnected: only the headphones will function.

The front input terminals allow quick and easy access for computer games, video cameras and other equipment which is not usually permanently connected. When a connection is made to the front panel terminals, the rear AV2 terminals are switched off.

VIDEO CAMERA



## Connecting Equipment to the TV (Rear)

### Monitor Out (TX-2985Z only)

The Monitor Out terminals reproduce the signals currently on the television screen. The on-screen signals could be a television programme or signals connected to the AV1 input.

The Monitor Out facility can be used to allow one video source (video tape, video disk etc.) to be connected to more than one television. Connect the Monitor out from this television to the AV Input of the second television.

If a video recorder is connected to the Monitor Out and video sources (VCR, video disk, camera etc.) are connected to the AV1 input, the television becomes a visual display for tape editing or copying.\*

The Monitor Out Audio can also be connected to a stereo amplifier or other hi-fi equipment.

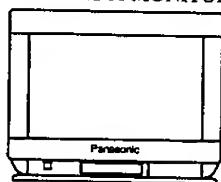
STANDARD VIDEO RECORDER



**NOTE:**

Never connect the same video recorder or other device to both the VIDEO IN and MONITOR OUT terminals of this television as this could cause incorrect operation.

TV USED AS A MONITOR

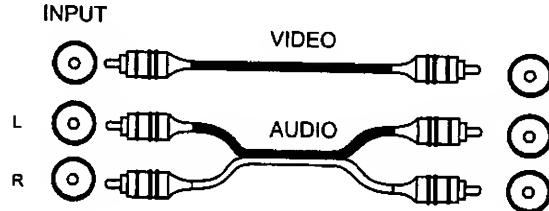


AUDIO AMPLIFIER



(No Video Connection)

MONITOR OUT

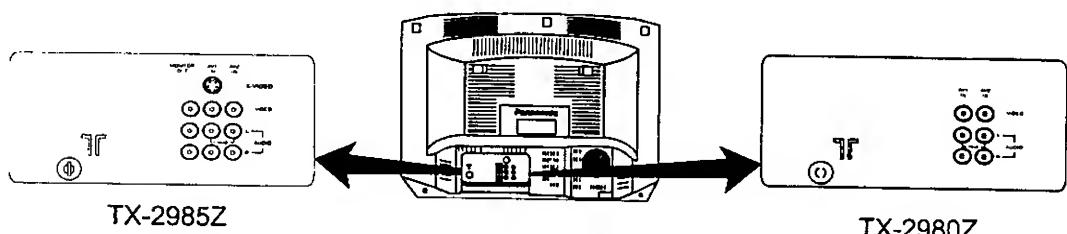


A / V  
CONNECT

\* Unauthorised recording of material from Television Broadcasts or from other video and/or audio sources may contravene copyright laws.

## Connecting Equipment to the TV (Rear)

### Rear Terminals



When using a VCR with the television always connect the Aerial to the VCR and connect an RF Cable (not supplied) between the VCR RF-Out and the television RF-In. You can watch videos by either tuning the television to the VCR (see page 16) or by connecting the VCR to the rear AV terminals.

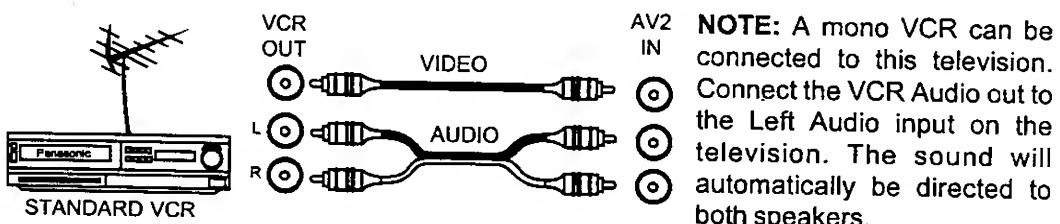
**Note:** When connecting a VCR through the RF-In, please switch the TV to Mono.



RF Cable (Not supplied)

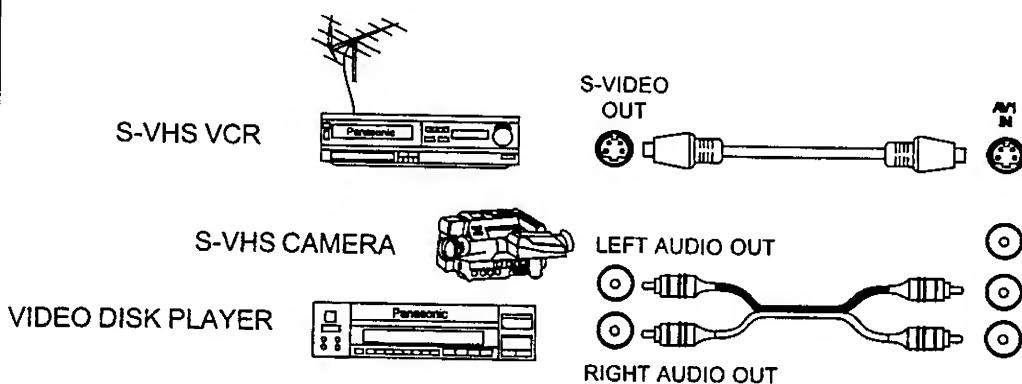
### Connecting a Standard VCR to the AV Input

Most standard Video Cassette Recorders use RCA type video and audio connectors. If your VCR has different type connectors please refer to the VCR instruction book for details.



### Connecting S-Video Equipment to the AV Input (TX-2985Z only)

S-Video equipment uses a 4Pin Mini Din (Male) plug for the video and RCA plugs for the audio. When an S-Video cable is connected to an S-Video input terminal, the RCA video terminal for that AV position will be disconnected.



## Customer's Record

The serial number of this product can be found on its rear cover and on the carton. It is recommended that you note the serial number and other details in the space provided and retain this booklet in a safe place as a permanent record of your purchase to aid in identification in the event of theft or loss.

Model No.

TX - \_\_\_\_\_

Serial No.

PA - \_\_\_\_\_

Purchase Date

\_\_\_\_\_

Purchased From

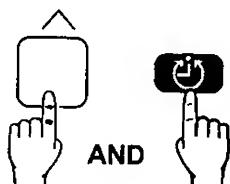
\_\_\_\_\_

### Control Mode

The Control Mode is used to limit the volume level of the television and also to disable the Function adjustments. This means that the picture settings cannot be changed. Control Mode is sometimes called Hotel Mode and the purpose is to prevent guests from changing preset values. The system works just as well in the home preventing children from changing picture settings or turning the volume up too high.

Set the picture controls (Brightness, Contrast, Colour etc.) to the desired levels.

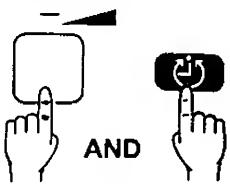
Adjust the volume to the level you would like to be the maximum level you require.



AND

Press the Remote Control Off-Timer Button and the Television Programme Number Up Button simultaneously. The picture settings are now fixed and the Function Button and the Off-Timer no longer work. The volume level set by you is now the maximum volume level for the television.

### Cancelling the Control Mode

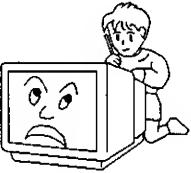
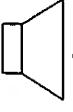
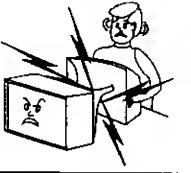
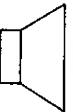
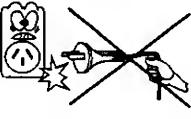
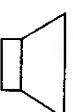
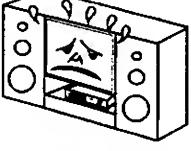
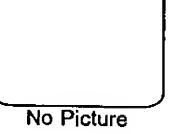
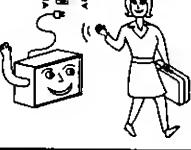
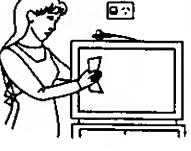
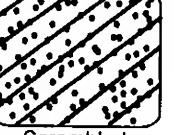
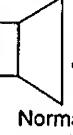
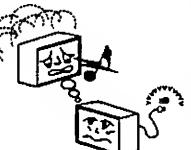


AND

The Control Mode can be cancelled by pressing the Remote Control Off-Timer Button\* and the Television Volume Down Button simultaneously. The Function Button now operates normally and the volume can again be turned up to maximum.

\* NOTE: The Off-Timer indication will not be on the screen.

## Warnings & Cautions      Troubleshooting

	Picture	Sound	Check
	<b>Danger</b> Do not insert foreign objects. (Keep metal or easily inflammable objects out of this television).	 Snowy Picture	 Noisy Sound Aerial Location, Direction or Connections.
	<b>Danger: High Voltage</b> Do not remove the rear cover as High Voltage components will be exposed.	 Multiple Image	 Normal Sound Aerial Location, Direction or Connections.
	<b>Danger</b> Take care of the power lead. <b>Do not pull the plug by the lead.</b> Do not use damaged leads.	 Interference	 Noisy Sound Electrical Appliances, Cars, Motorcycles or Fluorescent Lamps.
	<b>Do not place any containers of water or other liquids on or near this television.</b>	 Normal Picture	 No Sound Volume (Check the Remote Control Mute function) Colour System Mode, refer to page 7 (AV Only).
	Adequate ventilation is essential. Allow a gap of at least 10cm around the TV, even in a cabinet or between shelves.	 No Picture	 No Sound Not plugged in, Not switched On or switched to stand By. Check Volume, Contrast and Brightness levels.
	Remove the Power Plug from the wall socket when the Television is not going to be used for an extended period of time.	 No Colour	 Normal Sound Colour Control. Colour System Mode, refer to page 7 (AV Only).
	<b>Cabinet and Picture Tube Care</b> The cabinet and picture tube can be kept in good condition by wiping with a clean, soft cloth moistened with a mild detergent and water.  <b>Do Not use solutions containing petroleum or other chemicals.</b> For safety, remove the plug from the power outlet when cleaning.	 Scrambled	 Normal or weak Sound Retune the Television.
	<b>Safety First</b> In the advent of unusual operation (e.g. odd sounds, smoke or aromas), turn the television Off and remove the power cord from the wall socket. Then call the Television Service Centre.	 Colour Patches	 Normal Sound Magnetic Interference. Refer to page 2.
		 Rolling Picture	 Noisy Sound Colour System Mode. Refer to page 7 (AV Only).

## Specifications

<b>RF Channels</b>	VHF 1 to 12 UHF 21 to 69 S01 to S03 S1 to S41	PAL B PAL G HYPER TUNER
<b>Receiving Systems</b>	1. 2. 3. 4.	PAL B/G NTSC 4.43 NTSC 3.58 PAL 60Hz
		Reception of Off air broadcasts Playback from Video Tape Recorders
		Playback from Special Video Tape Recorders and Special Video Disc Players (Via the AV Sockets) only.
<b>Power Requirements</b>	230Volts ± 10% 50Hz	
<b>Power Consumption</b>	155W (Max)	12W (Stand-by condition)
<b>Chassis</b>	MX-4M	
<b>Tuning System</b>	Frequency synthesized, 100 Position Hyper Tuner	
<b>Picture Tube</b>	68cm Viewable (Measured diagonally) Deflection angle 108°.	
<b>Audio Output</b>	Twin Internal Speaker System (10% THD), 8Ω 5W + 5W	
<b>Aerial Impedance</b>	75Ω Unbalanced coaxial	
<b>S-Video (TX-2985Z only)</b>	S-Video in	Y: 1.0Vp-p, 75Ω C: 0.3Vp-p, 75Ω
<b>Video / Audio Terminals</b>	Video in Audio in	1.0Vp-p, 75Ω Approx. 400mV
<b>Monitor Out (TX-2985Z only)</b>	Video Out Audio Out	1.0Vp-p, 75Ω Approx. 400mV
<b>Accessories Supplied</b>	Remote Control Instruction Manual 2 Batteries	EUR51973 for TX-2985Z EUR51977 for TX-2980Z TQB4A0117 Type 'AA'
<b>Dimensions</b>	Width = 73.0cm	Depth = 51.0 cm Height = 53.0cm
<b>Weight</b>	40.0kg (Net)	
<b>Note:</b>	Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.	